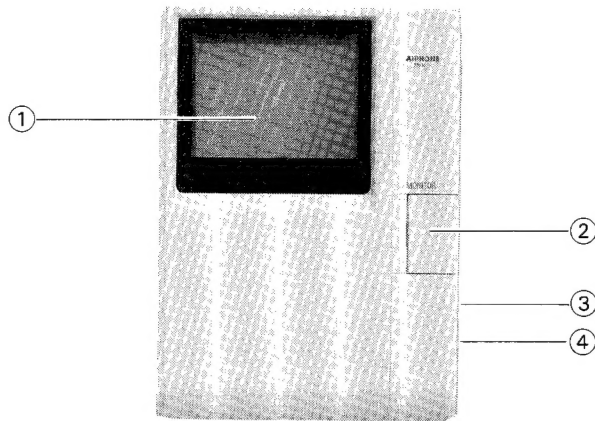


# VIDEO MONITOR

Models; **MFH-U** (Video monitor, surface-mount)  
**MFH-UB** (Video monitor, semi-flush mount)

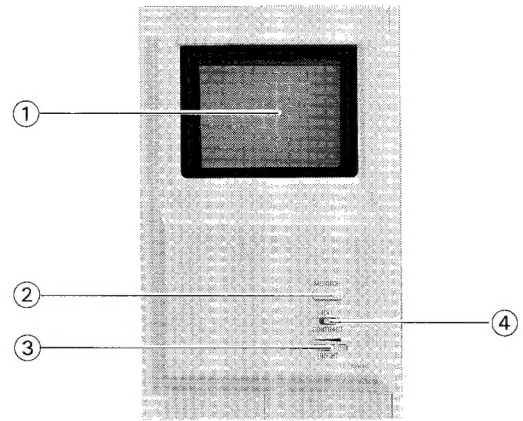
## INSTRUCTIONS

### 1 NAMES AND FUNCTIONS



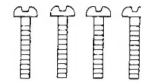
**MFH-U** (surface-mount)

- ① Video monitor
- ② MONITOR button
- ③ Brightness control
- ④ Contrast switch (3-level)

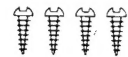


**MFH-UB** (semi-flush mount)

#### Mounting accessories;



screw (4):  
4mm dia × 25



Wood screw (4):  
4.1mm dia. × 16

### 2 FEATURES

- \* MFH-U/UB are video monitors for use with IE series Chime Tone Intercoms: IE-1AD(U), IE-1GD(U) & IE-2AD(U) and LEF/LEF-B Loudspeaker Intercom Systems.
- \* Door answering by intercom with caller's image on video monitor.
- \* Video monitoring of up to 3 entries (either MF-D/DL video door station or MFW-CZ camera) from any inside video monitors.
- \* Max. 10 video monitors per system.

SYSTEM	DOOR	ROOM	VIDEO DOOR STATION	SURVEILLANCE CAMERA (*)
IE-1AD(U)	1	1	1 (max.)	2
IE-1GD(U)	1	3	1 (max.)	2
IE-2AD(U)	2	3	2 (max.)	1
LEF	3	8	3 (max.)	0
LEF-B	3	8	3 (max.)	0

(\*) Shows numbers of camera installable when video door station is used to full capacity.

Note; Video door station can also be audio only door station plus surveillance camera.

# 3

## PREINSTALLATION AND OPERATION TIPS AND PRECAUTIONS

### \* Installation;

- ① Never connect any terminals on the units to an AC power line.  
*When mounting the MFH-U/MFH-UB units in place of existing bell or chime, be sure to disconnect all wires from the present transformer.*
- ② Do not open the front cover of MFH-U/MFH-UB units, without first unplugging the power supply from the AC outlet. The high voltage is loaded on the monitor unit inside.
- ③ Do not drop or apply any undue shock to the unit which may damage the picture tube.
- ④ Avoid running the connecting wires through doors, windows or in areas that may cause pinching or disconnect.
- ⑤ The MFH-U/MFH-UB units must be installed in as dry and dust-free an environment as possible.

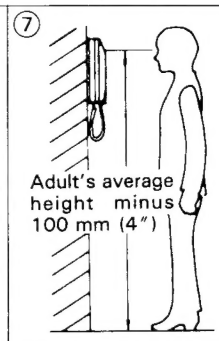
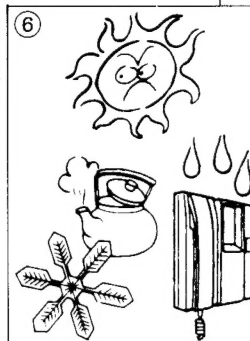
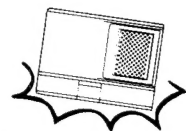
### \* Installation location requirements;

- ⑥ Do not install MFH-U/MFH-UB video monitors in a place where they are directly exposed to; direct sunlight, water, air conditioner, heater, chemicals, frost, iron dust, vapor, etc.
- ⑦ Determine the installation height so that the center of the MFH-U/MFH-UB video monitors will be at the convenient eye level: adults' average height minus 100 mm (4").

### \* Maintenance;

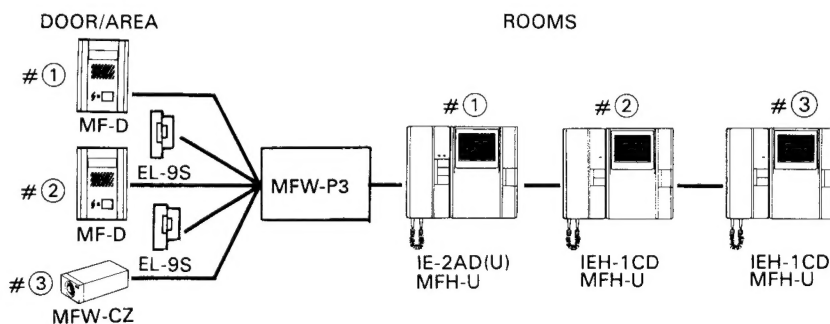
- ⑧ Clean your MFH-U/UB equipment with a soft cloth dampened with neutral household cleaner. Never use lacquer thinner, benzene, etc.

③ NEVER



### \* System layout & components requirements;

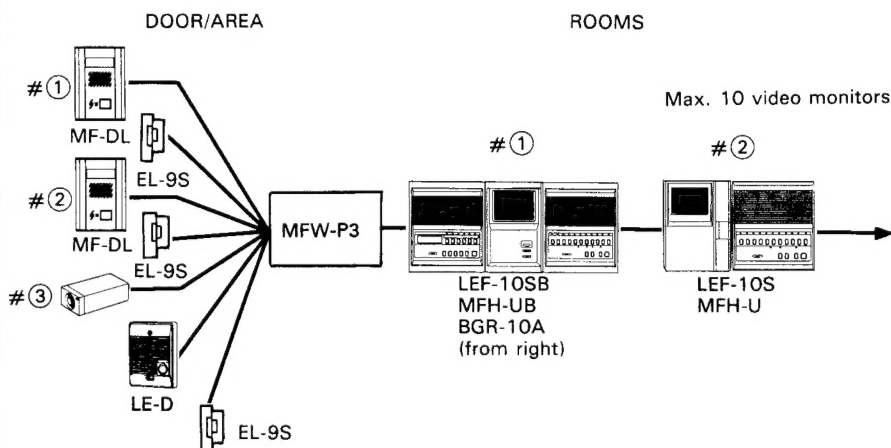
#### IE-2AD(U)/MFH-U Video system;



#### Components;

MF-D, Video door station.  
Surveillance camera:  
(MFW-CZ, supplied by Aiphone. Can be used with IE-DA, etc. audio only door station).  
IE-1AD(U), Main room station.  
IE-1GD(U), -do-  
IE-2AD(U), -do-  
IEH-1CD, Sub room station.  
MFH-U, Video monitor, surface-mount.  
MFW-P3: Video adaptor, surface-mount.

#### LEF/MFH-U Video system;



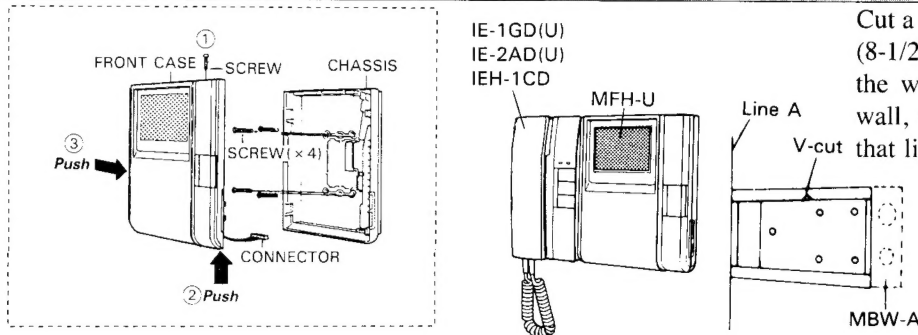
#### Components;

MF-DL, Video door station.  
Surveillance camera:  
(MFW-CZ, supplied by Aiphone. Can be used with LE-D/DA audio only door station).  
LEF-5, 10, 10S: Master station.  
MFH-U: Video monitor, surface-mount.  
LEF-5B, 10SB: Master station, semi-flush mount.  
MFH-UB: Video monitor, semi-flush mount.  
MFW-P3: Video adaptor, surface-mount.  
BGR-10A: All call & BGM adaptor for door station chime call-in.

# 4

## INSTALLATION

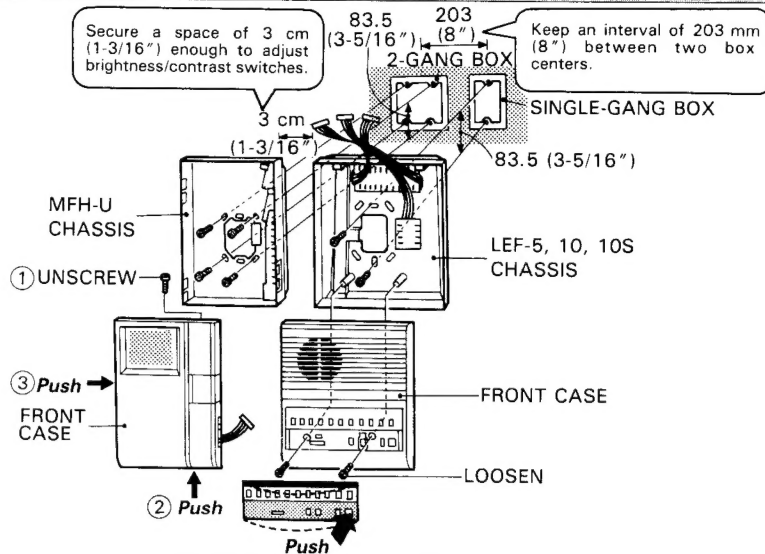
### (1) IE/MFH-U surface-mounting to MBW-A back box;



Cut a hole 95 mm (3-3/4") high by 215 mm (8-1/2") wide and 40 mm (1-9/16") deep into the wall. Position the MBW-A box in the wall, with the V-cut in the upper position, so that line A crosses vertically with the floor.

To mount the MFH-U, remove the top screw in the case, and separate front case from the chassis, pushing the bottom, right of front case upward, then the left side of the case to the right, and removing the connector. Attach the chassis to MBW-A and reattach the front case. To mount IE intercom, attach mounting bracket to MBW-A and mount the unit onto the bracket.

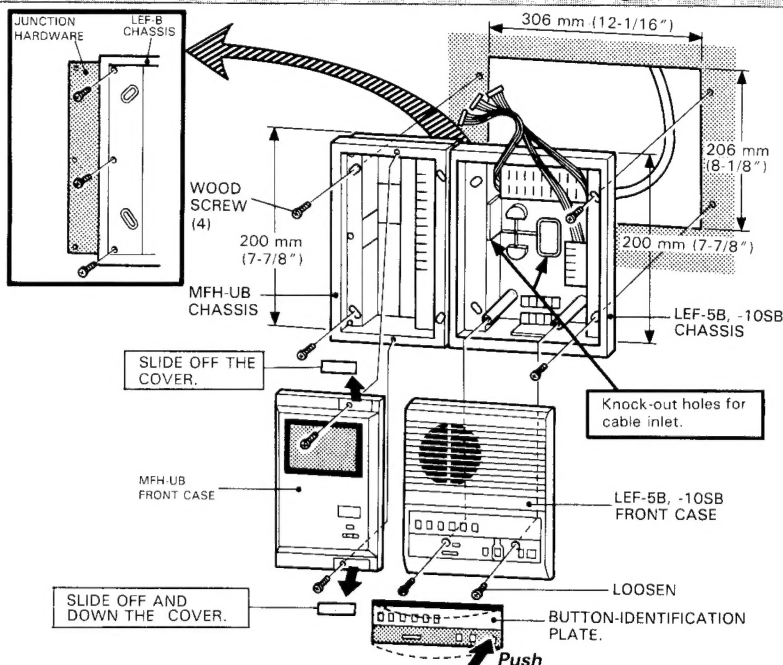
### (2) LEF/MFH-U surface-mounting (on gang boxes);



When mounting LEF master & MFH-U video monitor side by side, be sure to locate MFH-U to the left of LEF master, keeping a space of 3 to 5 cm (1-3/16" to 2") for brightness and contrast adjustment.

First, separate each chassis from front case. Mount the chassis with the supplied screws. After wiring, reattach connectors and front case to chassis.

### (3) LEF-B/MFH-UB semi-flush mounting to wall;



To mount LEF-5B/10SB and MFH-UB units, cut and open a hole of H: 206 × W: 306 (mm) (H: 8-1/8" × W: 12-1/16"), keeping a space of 3 to 5 cm (1-3/16" to 2") on each side.

Before installation, join together both LEF-B and MFH-UB chassis by attaching a junction hardware with 3 screws (supplied).

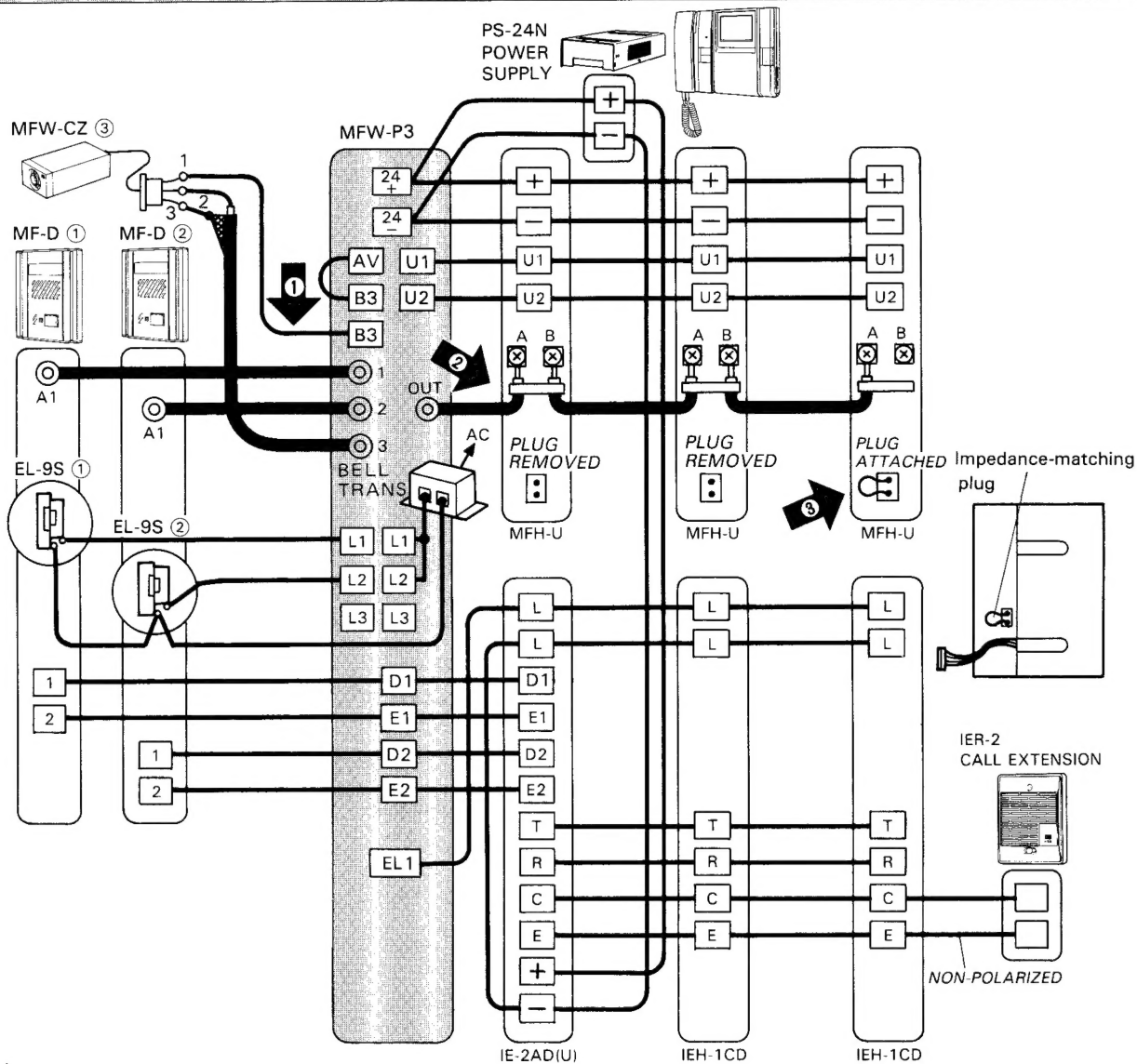
Attach two chassis with 4 wood screws (supplied).

After wiring, remount front cases to each chassis.

# 5

## WIRING DIAGRAMS

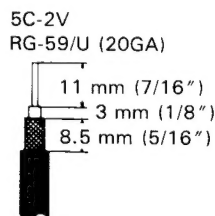
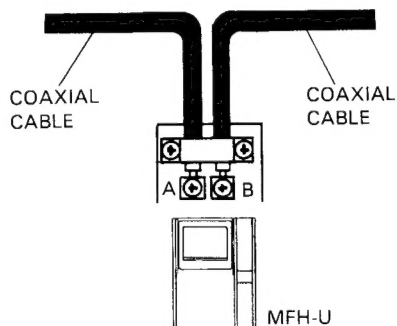
### (1) IE-2AD(U) SYSTEM w/VIDEO MONITORING CAPABILITY;



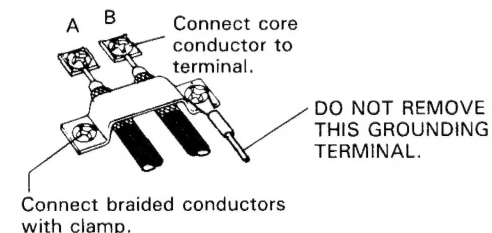
- 1 The MFW-CZ camera (No. 3) must correspond each with video input terminals 3 (for coaxial cable) and B3 (for video signal input) on MFW-P3.
- 2 Connect coaxial cable from MF-D thru MFW-P3 to terminal A on MFH-U.
- 3 In a system with more than one video monitor, remove impedance-matching plug on all video monitors, except on the farthest monitor.

IE-2AD(U) can accept max. 2 video door stations, one each for IE-1AD(U) and IE-1GD(U).

#### ■ COAXIAL CABLE CONNECTION;

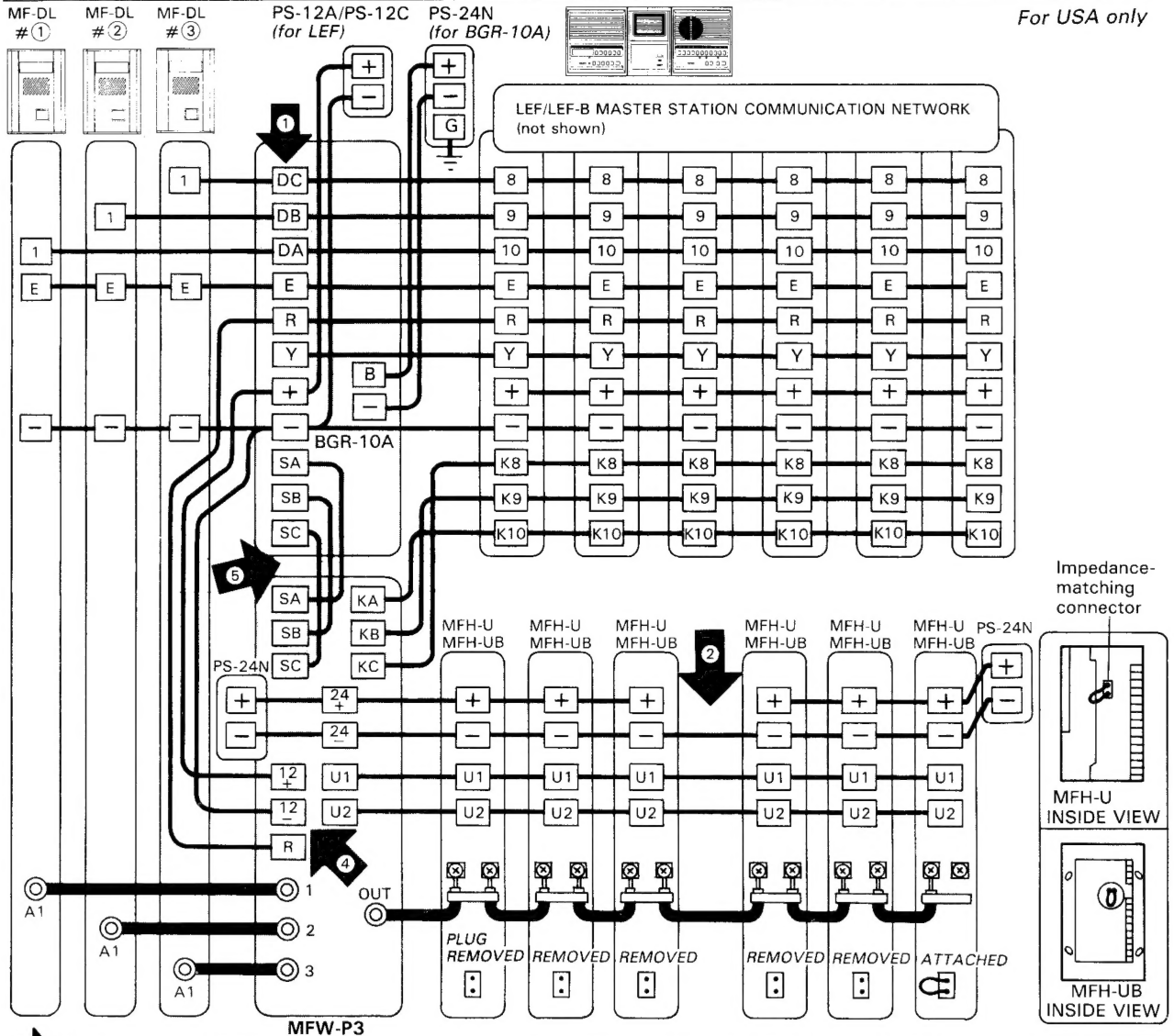


Fold back braided conductors in a manner that core conductor be not bent nor shorted to braided conductors.



## (2) LEF VIDEO SYSTEM WITH MONITORING CAPABILITY;

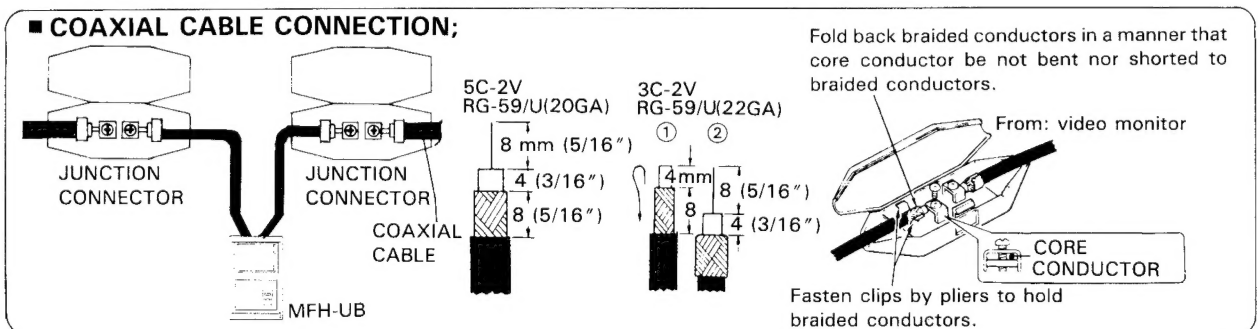
For USA only



- From each MF-DL, connect to either terminal DA, DB or DC on BGR-10A all call/BGM adaptor. By this connection, door station call-in can be signalled by chime tone at all the connected master stations.
- Install a power supply PS-24N for every three MFH-U/UB video monitors. As shown, do not connect + terminal between MFH-U/UB Nos.3 ~ 4, nor between Nos.6 ~ 7.
- In a system with more than one video monitor, remove all the impedance-matching connectors, except at the farthest monitor.
- When connecting PS-12A/PS-12C power supply, remove shorting links between AV - 12+ and ED - 12- on MFW-P3 adaptor.
- For wiring connections between adaptors and door stations, please follow the table below for system's proper functioning;

Door station No.	1	2	3	Camera/area No.	1	2	3
LEF door-assigned terminal	10	9	8	Camera-assigned terminal (MFW-P3)	B1	B2	B3
BGR-10A door station terminal	DA	DB	DC	Coaxial cable input	1	2	3
For calling detection (MFW-P3, BGR-10A)	SA	SB	SC				
Video control (MFW-P3)	KA	KB	KC				
- do - (LEF)	K10	K9	K8				
For door release control (MFW-P3)	L1	L2	L3				
Coaxial cable input	1	2	3				

### COAXIAL CABLE CONNECTION;





# 6

## OPERATIONS

### 1. Receiving a call from door station;

Door station call-in is annunciated by chime tone and picture appears on video monitor.

Press a selector button with illuminated LED on LEF/LEF-B. Depress TALK button to talk and release to listen.

In IE system, simply pick up handset at any station to reply.

**NOTES;** (1) Reply within 45 seconds after chime tone sounds.

(2) Picture remains for approx. 2 minutes and half. If picture goes off, depress MONITOR button until you have the picture of the calling door station.

### 2. Video monitoring;

Depress MONITOR button on MFH-U/MFH-UB to turn on door station/camera NO.1

Depress MONITOR button again to have the picture of door station/camera No.2.

If a door station/camera NO.3 is installed, depress MONITOR button third time (if not installed, picture goes off).

The fourth pressing MONITOR button turns off the picture.

The fifth pressing returns to the No.1 picture.

**NOTES;** (1) The picture goes off approximately 1 minute after MONITOR button is pressed.

The picture which comes on after last time MONITOR button is pressed, starts from the door station/camera last monitored. If door station calls in after last monitoring, the next video monitoring starts from the door station/camera No.1.

(2) To monitor the other door station(s);

While communicating with one video door station, you can switch to the picture of the next door station, by pressing MONITOR button on MFH-U/MFH-UB.

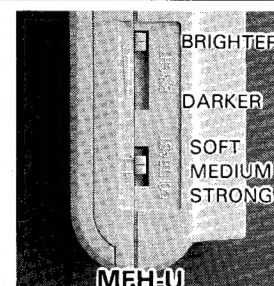
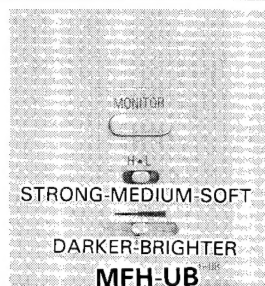
(3) When door station calls in while monitoring, the picture is switched to that of calling door station.

### 3. Adjusting brightness;

Turn the control to the right or upward to make the picture brighter.

### 4. Adjusting contrast;

The picture contrast may be adjusted to 3 levels as desired.



# 7

## SPECIFICATIONS

- \*Power source: DC 24V, supplied by PS-24N power supply. (required for every three MFH-U/MFH-UB).
  - \*Current consumption: Max. 0.35A.
  - \*CRT: 4 inch CRT, direct view and flat type.
  - \*Scanning line: 525 lines.
  - \*Wiring: One coaxial cable and 4 wires between MFH-U/UB's and between MFH-U/UB's and MFW-P3.
- | Coaxial cable Diameter | 5C-2V 1.0 mm | Coaxial cable AWG | RG-59/U (20GA) 18AWG |
|------------------------|--------------|-------------------|----------------------|
| Distance               | 75 m         | Distance          | 250'                 |
- \*Wiring distance between MFW-P3 and MFH-U/UB:
  - \*Dimensions: MFH-U; (W × H × D) 155 × 210 × 50 (6-1/8" × 8-1/4" × 2").  
MFH-UB; (W × H × D) 150 × 240 × 73 (5-15/16" × 9-7/16" × 2-7/8").
  - \*Weight: MFH-U; Approx 1.1 kg (2.43 lbs.). MFH-UB; Approx. 1.2 kg (2.65 lbs.)

### WARRANTY

Aiphone warrants its products to be free from defects of material and workmanship under normal use and service for a period of one year after delivery to the ultimate user and will repair free of charge or replace at no charge, should it become defective upon which examination shall disclose to be defective and under warranty. Aiphone reserves unto itself the sole right to make the final decision whether there is a defect in materials and/or workmanship; and whether or not the product is within the warranty.

This warranty shall not apply to any Aiphone product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished, nor extended to units which have been repaired or altered outside of the factory.

This warranty does not cover batteries or damage caused by batteries used in connection with the product.

This warranty covers bench repairs only, and any repairs must be made at the shop or place designated in writing by Aiphone. Aiphone will not be responsible for any costs incurred involving on site service calls.

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AIPHONE CORPORATION, BELLEVUE, WA, USA

INTERCOM SYSTEMS  
**AIPHONE**  
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Printed in Japan(E)

MFH-U/UB-I(E)0990D